STN
HCAPLUS, USPATALL, SCAPUS, INSPEC
9/17/03

=> d l8 1-8 abs,bib

L8 ANSWER 1 OF 8 HCAPLUS COPYRIGHT 2003 ACS on STN
AB Polycryst. Si ingots for use in photoconversion technol. are obtained by melting Si in a SiO2 crucible, allowing the melt to cool and to crystallize, rotating the crucible for 180.degree. around a horizontal axis, and heating the crucible bottom to melt the film of Si adhering to the **crucible** and to **detach** the ingot by gravity.
AN 1982:184235 HCAPLUS
DN 96:184235
TI Method and apparatus for preparing a **polycrystalline silicon** ingot
IN Guenel, Claude; Fally, Jacques
PA Compagnie Generale d'Electricite S. A., Fr.
SO Fr. Demande, 15 pp.
CODEN: FRXXBL
DT Patent
LA French
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI FR 2477047	A1	19810904	FR 1980-4543	19800229
PRAI FR 1980-4543		19800229		

L8 ANSWER 2 OF 8 USPATFULL on STN
AB A crucible 1 made of a C/C composite material for use in single crystal pulling, the crucible 1 having a lateral cylindrical portion 11 and a bottom portion 12 integrally formed as multiple layers wound by a filament winding method, in which the first layer 2 as the innermost crucible layer, among the multiple layers, is wound such that carbon fibers form tracks passing the polar point O at the bottom 12, the second layer 3 wound on the outer surface of the first layer 2 is wound along tracks to form a first outer circular bottom 8 that extends outwardly from about a middle part of a raised portion 6 where the carbon fibers of the first layer 2 are localized to the polar point O, and the third layer 4 and the succeeding layers wound on the outer surface of the second layer 3 are wound respectively along tracks to form outer circular bottoms that extend stepwise outwardly from about the middle parts of the outer surfaces of layers situated inside the respective layers, and the top for the raised portion of the first layer and the top for each of the outer circular bottoms at the bottom of the carbon fibers wound around as the multiple layers are at an substantially identical height, detachment and deformation of carbon fibers during use being suppressed by reducing the machining for the bottom of the crucible after molding.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AN 2002:327408 USPATFULL
TI Crucible made of carbon fiber-reinforced carbon composite material for single crystal pulling apparatus
IN Yamaji, Masatoshi, Mitoyo-gun, JAPAN
Nishi, Hisanori, Mitoyo-gun, JAPAN
Tomita, Yuji, Mitoyo-gun, JAPAN
Bito, Shingo, Mitoyo-gun, JAPAN
Miyatani, Toshiyuki, Mitoyo-gun, JAPAN
PA Toyo Tanso Co., Ltd., Osaka-shi, JAPAN (non-U.S. corporation)
PI US 2002185061 A1 20021212
AI US 2002-136531 A1 20020502 (10)
PRAI JP 2001-134762 20010502
DT Utility
FS APPLICATION
LREP OBLON SPIVAK MCCLELLAND MAIER & NEUSTADT PC, FOURTH FLOOR, 1755

JEFFERSON DAVIS HIGHWAY, ARLINGTON, VA, 22202
CLMN Number of Claims: 3
ECL Exemplary Claim: 1
DRWN 7 Drawing Page(s)
LN.CNT 678
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L8 ANSWER 3 OF 8 USPATFULL on STN
AB A crucible used in the growth of **polycrystal silicon** by a cast method comprises a crucible body for, when solid material silicon is melted, containing the melted material silicon, and a material holder provided on the crucible body, for holding further material silicon on the material silicon loaded into the crucible body.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AN 2002:162309 USPATFULL
TI Cruicible and growth method for **polycrystal silicon** using same
IN Katoh, Nobuyuki, Yoshino-gun, JAPAN
PI US 2002083886 A1 20020704
AI US 2001-994022 A1 20011127 (9)
PRAI JP 2000-367779 20001201
DT Utility
FS APPLICATION
LREP NIXON & VANDERHYE P.C., 8th Floor, 1100 Noth Glebe Road, Arlington, VA, 22201-4714
CLMN Number of Claims: 9
ECL Exemplary Claim: 1
DRWN 4 Drawing Page(s)
LN.CNT 350
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L8 ANSWER 4 OF 8 USPATFULL on STN
AB A (111) cubic silicon carbide single-crystal layer is formed on a (111) silicon wafer, and then the silicon wafer is removed. Thus prepared (111) cubic silicon carbide single-crystal layer is disposed in a graphite crucible to function as a seed crystal. Silicon carbide source material powder is also held in the graphite crucible and sublimated in an atmosphere including inert gas, while controlling a temperature of the (111) cubic silicon carbide single-crystal layer to be lower than a temperature of the silicon carbide source material powder. As a result, a (0001) .alpha.-type silicon carbide single-crystal layer can be formed on the (111) cubic silicon carbide single-crystal layer with a large diameter and high quality at low cost.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AN 2000:113308 USPATFULL
TI Method of producing single-crystal silicon carbide
IN Kito, Yasuo, Okazaki, Japan
Kotanshi, Youichi, Okazaki, Japan
Onda, Shoichi, Toyokawa, Japan
Hanazawa, Tatuyuki, Okazaki, Japan
Kitaoka, Eiji, Anjo, Japan
PA Denso Corporation, Kariya, Japan (non-U.S. corporation)
PI US 6110279 20000829
AI US 1998-49979 19980330 (9)
RLI Continuation-in-part of Ser. No. US 1997-826147, filed on 27 Mar 1997, now abandoned
PRAI JP 1996-75775 19960329
JP 1997-129875 19970520
JP 1997-163087 19970619
DT Utility
FS Granted

EXNAM Primary Examiner: Hiteshew, Felisa
LREP Pillsbury, Madison & Sutro, LLP
CLMN Number of Claims: 48
ECL Exemplary Claim: 1
DRWN 34 Drawing Figure(s); 11 Drawing Page(s)
LN.CNT 1386
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L8 ANSWER 5 OF 8 USPATFULL on STN
AB In a method of producing single crystals on a seed crystal, the seed crystal is covered by a protection layer except for a surface on which the single crystals are to be formed. The protection layer is made of material such as carbon or the like, which is stable in a step of forming the single crystals. As a result, a temperature gradient and mass transfer in the seed crystal can be prevented, whereby quality of the single crystals formed on the seed crystal can be improved.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AN 1999:102280 USPATFULL
TI Method of producing single crystals and a seed crystal used in the method
IN Kitou, Yasuo, Okazaki, Japan
Sugiyama, Naohiro, Nagoya, Japan
Okamoto, Atsuto, Nagoya, Japan
Tani, Toshihiko, Nagoya, Japan
Kamiya, Nobuo, Nisshin, Japan
PA Denso Corporation, Kariya, Japan (non-U.S. corporation)
PI US 5944890 19990831
AI US 1997-829449 19970328 (8)
PRAI JP 1996-75776 19960329
JP 1996-103581 19960329
DT Utility
FS Granted
EXNAM Primary Examiner: Hiteshew, Felisa
LREP Pillsbury Madison & Sutro LLP
CLMN Number of Claims: 21
ECL Exemplary Claim: 1
DRWN 17 Drawing Figure(s); 6 Drawing Page(s)
LN.CNT 915
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L8 ANSWER 6 OF 8 USPATFULL on STN
AB A silicon melting crucible having a double structure, in which a quartz crucible is inserted inside of a carbon crucible, is provided with devices for preventing deformation, such as turning-down, buckling and bending at an upper portion of the quartz crucible, or invasion of an SiO gas into a space between the quartz crucible and the carbon crucible during pulling up of a silicon single crystal. According to one form of the invention an upper portion of the quartz crucible has a frusto-conical inclined portion with an angle of inclination desirably of from 5.degree. to 40.degree.. According to another form of the invention a carbon ring having a cross section of either L-shape or U-shape is applied to the upper portion of the quartz crucible and the carbon crucible.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AN 1999:75165 USPATFULL
TI Silicon melting crucible
IN Takemura, Kaoru, Amagasaki, Japan
PA Sumitomo Sitix Corporation, Amagasaki, Japan (non-U.S. corporation)
PI US 5919306 19990706
AI US 1997-963064 19971103 (8)
DT Utility

FS Granted
EXNAM Primary Examiner: Hiteshew, Felisa
LREP Armstrong, Westerman, Hattori, McLeland & Naughton
CLMN Number of Claims: 15
ECL Exemplary Claim: 1
DRWN 7 Drawing Figure(s); 4 Drawing Page(s)
LN.CNT 424
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L8 ANSWER 7 OF 8 USPATFULL on STN
AB A single crystal pulling apparatus based on Czochralski technique having a conduit for continuously supplying granular polycrystal material to the crucible and a vertical purge tube suspended centrally into the heating chamber, wherein the purge tube is vertically shiftable; a heat shield ring is connected to the lower end of the purge tube, and a cylindrical quartz partition ring made of a quartz glass containing no bubbles is held vertically by the heat shield ring in a manner such that the lower end of the quartz partition ring comes substantially lower than the lower end of the purge tube so that, by being dipped in the polycrystal melt, the partition ring isolates the interior surface of the melt from the exterior surface of the melt, over which latter the granular polycrystal material is poured.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AN 94:109958 USPATFULL
TI Single crystal pulling apparatus
IN Takano, Kiyotaka, Annaka, Japan
Fusegawa, Izumi, Annaka, Japan
Yamagishi, Hirotoshi, Annaka, Japan
PA Shin-Etsu Handotai Co., Ltd., Tokyo, Japan (non-U.S. corporation)
PI US 5373805 19941220
AI US 1992-961764 19921015 (7)
PRAI JP 1991-298028 19911017
JP 1991-310106 19911030
DT Utility
FS Granted
EXNAM Primary Examiner: Breneman, R. Bruce; Assistant Examiner: Garrett, Felisa
LREP Whitham, Curtis, Whitham & McGinn
CLMN Number of Claims: 10
ECL Exemplary Claim: 1
DRWN 3 Drawing Figure(s); 3 Drawing Page(s)
LN.CNT 577
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L8 ANSWER 8 OF 8 USPATFULL on STN
AB An improved liner for crucibles and dies used to melt silicon comprising one or more sheets of graphite each of which has on at least the surface facing the silicon melt a layer of silicon nitride or silicon oxynitride.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AN 82:52042 USPATFULL
TI Silicon melting crucible
IN Berkman, Samuel, Florham Park, NJ, United States
Duffy, Michael T., Princeton Jct., NJ, United States
Temple, Harold E., Trenton, NJ, United States
PA RCA Corporation, New York, NY, United States (U.S. corporation)
PI US 4356152 19821026
AI US 1981-243441 19810313 (6)
DT Utility
FS Granted
EXNAM Primary Examiner: Clements, Gregory N.

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LREP   Morris, Birgit E., Swope, R. Hain
CLMN   Number of Claims: 11
ECL    Exemplary Claim: 1
DRWN   3 Drawing Figure(s); 2 Drawing Page(s)
LN.CNT 333
CAS INDEXING IS AVAILABLE FOR THIS PATENT.


=> d his

     (FILE 'HCAPLUS, USPATFULL, USPAT2, JAPIO, INSPEC' ENTERED AT 13:01:02 ON
     17 SEP 2003)
                DELETE HIS
L1           166 S (CRUCIBLE)(8A)(DETACH?)
L2         62600 S (POLYCRYSTAL?)(8A)(SI OR SILICON)
L3         61255 S (CAST?)(8A)(METHOD?)
L4          1756 S (CRUCIBLE#)(8A)(SILICA)
L5       1921034 S (CARBON)
L6             1 S L1 AND L2 AND L3 AND L4 AND L5
L7             1 S L1 AND L2 AND L3
L8             8 S L1 AND L2

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=> d his

     (FILE 'HCAPLUS, USPATFULL, USPAT2, JAPIO, INSPEC' ENTERED AT 13:01:02 ON
     17 SEP 2003)
                DELETE HIS
L1           166 S (CRUCIBLE)(8A)(DETACH?)
L2         62600 S (POLYCRYSTAL?)(8A)(SI OR SILICON)
L3         61255 S (CAST?)(8A)(METHOD?)
L4          1756 S (CRUCIBLE#)(8A)(SILICA)
L5       1921034 S (CARBON)

=> s l1 and l2 and l3 and l4 and l5
L6             1 L1 AND L2 AND L3 AND L4 AND L5

=> d l6 abs,bib

L6   ANSWER 1 OF 1  USPATFULL on STN
AB     A crucible used in the growth of polycrystal silicon
       by a cast method comprises a crucible body for, when
       solid material silicon is melted, containing the melted material
       silicon, and a material holder provided on the crucible body, for
       holding further material silicon on the material silicon loaded into the
       crucible body.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AN     2002:162309  USPATFULL
TI     Cruicible and growth method for polycrystal silicon
       using same
IN     Katoh, Nobuyuki, Yoshino-gun, JAPAN
PI     US 2002083886      A1   20020704
AI     US 2001-994022     A1   20011127 (9)
PRAI   JP 2000-367779      20001201
DT     Utility
FS     APPLICATION
LREP   NIXON & VANDERHYE P.C., 8th Floor, 1100 Noth Glebe Road, Arlington, VA,
       22201-4714
CLMN   Number of Claims: 9
ECL    Exemplary Claim: 1
DRWN   4 Drawing Page(s)
LN.CNT 350
CAS INDEXING IS AVAILABLE FOR THIS PATENT.


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